

L 04256-67

ACC NR: AR6010516

maximum of the loss factor in the direction of cleavage increases from several units for hard phlogopite to several hundred units for soft phlogopite. The foliations cause a deterioration in the electrical properties of the phlogopite also in a direction perpendicular to the planes of cleavage. In this direction, the specific inductive capacitance does not essentially depend upon hardness and is close to six, and the frequency maximum of the loss factor associated with closed foliations is of the order of  $10^{-2}$  and is determined chiefly by the transverse dimension of the foliations rather than by hardness. The swelling of phlogopite when heated and the deterioration in dielectric properties associated with it may be eliminated by pressure greater or equal to the pressure of saturated water vapor at the working temperature. The concentration of closed foliations for phlogopite of average hardness is of the order of  $10^6 \text{ cm}^{-3}$ , and the thickness of electrolytic water films in closed foliations is of the order of  $10^2\text{--}10^3$  monolayers, while the specific resistance of the films at room temperature is  $10^4\text{--}10^5 \text{ ohm/cm}$ . Translation of abstract 5 illustrations and bibliography of 5 titles. Irkutsk State University  
(Irkutskiy gosudarstvennyy un-t) A. Petrashko

SUB CODE: 11, 20

Card 2/2 f.v

L 09369-67 EWP(e)/EWT(m) WH  
ACC NR: A16023411

SOURCE CODE: UR/0139/66/000/003/0040/0043

AUTHOR: Metsik, M. S.; Liopo, V. A.

ORG: Irkutsk State University im. A. A. Zhdanov (Irkutskiy gosuniversitet)

TITLE: Study of structural changes of phlogopites upon heating

SOURCE: IVUZ. Fizika, no. 3, 1966, 40-43

TOPIC TAGS: mica product, x ray study, ir spectrum, temperature dependence, crystal structure analysis, dehydration

ABSTRACT: The authors have repeated their earlier work (Kristallografiya v. 3, no. 1, 95, 1958) and succeeded in greatly reducing the influence of swelling of samples on the quality of x ray patterns and in obtaining new facts on the structural variations occurring in phlogopites (such as mica) when heated. The better results are due to replacing the earlier Bragg spectrograph and photography of the reflection with the more accurate goniometer of the URS-50-1 x ray apparatus and to recording the reflections on paper by ionization. The mica-phlogopite plates tested measured 14 x 0.5 mm and were clamped with thin beryllium discs in a ceramic holder to reduce the influence of swelling. The experiments have shown that there are three types of changes in the interplanar distance due to variation of temperature. For hard phlogopites this dependence is linear; for soft planes, the expansion coefficient is negative in the temperature interval 160 - 250C. For phlogopites of average hardness, the curve occupies an intermediate position between the foregoing two. Infrared spectroscopy has

Card 1/2

L 09369-67

ACC NR: AP6023411

shown that the absorption in the region of the valence vibrations of OH groups is maximal for soft phlogopites. The effect is attributed to the existence in the phlogopite of layers capable of becoming dehydrated and losing the water between the layers. The dehydration can be effected not only by heating, but also by electron bombardment. Orig. art. has: 4 figures and 10 formulas.

0  
SUB CODE: 20// SUBM DATE: 09Jul64/ ORIG REF: 010/ OTH REF: 006

Card 8/2 CC

KHYUSSE, I.Yu. [Husse, I.J.]; METSIK, R.E.; METSIK, L.Yu. [Metsik, L.J.]

Sediments on atmospheric distillation column plates and in experimental pipe stills for processing tar at the shale processing combine in Kohtla-Jarve. Khim. i tekhn. gor. slan. i prod. ikh perer. no.9:132-138 '60. (MIRA 15:6)  
(Kohtla-Jarve—Oil-shale industry—Equipment and supplies)

SHELOUMOV, V.V.; METSIK, R.E.; KAL'BERG, A.O. [Kalberg, A.];  
KIVIMAA, Kh.M. [Kivimaa, H.]

Preparing oil shale tar for distillation. Khim. i tekhn. gor.  
slan. i prod. ikh perer. no.10:174-190 '62. (MIRA 17:5)

KHYUSSE, I.Yu. [Husse, I.]; METSIK, R.E.; METSIK, L.Yu. [Metsik, L.]

Investigating the process of the formation of calcium chloride  
in the tar and tar water from the semicoking of oil shale in  
gas generators. Khim. i tekhn. gor. slan. i prod. ikh perer.  
no.10:257-263 '62.

Investigating the composition of inorganic chloride  
compounds in the products of the semicoking of oil shale  
in gas generators. Ibid.:264-277 (MIRA 17:5)

YEFIMOV, V.M., METSIK, I.V.

Dependence of the calcium chloride content in the generator tar  
and tar water on the technological conditions of gas generators.  
Khim. i tekh. gor. slan. i pred. tkh perer. n. 1272-84-142.  
(MIRA)

L 35536-65 SPA(s)-2/ENT(m)/EPF(c)/EWA(d)/EPR/EWP(j)/T/EWP(t)/EWP(b) Po-4/Pr-4/  
Ps-4/Pt-10 JD/WW/WB/RM S/0286/65/000/005/009/0098  
ACCESSION NR: AP5008229

AUTHORS: Metsik, R. E.; Tyurkeon, Kh. R.

52  
B  
f

TITLE: A method for protecting carbon steel from corrosion! Class 48, No. 168972

SOURCE: Byulleten' izobreteniya i tovarnykh znakov, no. 5, 1965, 98

TOPIC TAGS: corrosion protection, carbon steel, inhibitor, phenol

ABSTRACT: This Author Certificate presents a method for protecting carbon steel from corrosion in acid solutions by applying an inhibitor. Shale phenols made according to ERTu 804-60 are used as the inhibitor. 7

ASSOCIATION: none

SUB CODE: M4

SUBMITTED: 09Feb62

ENCL: 00

NO REF SOV: 000

OTHER: 000

Card 1/1

SEREBRYANNIKOVA, N.V.; METSIK, R.E.

Anticorrosive protection of the equipment used in the arsenic-soda process of gas purification. Khim. i tekhn. gor. slan. 1 prod. ikh perer no.13;171-178 '64. (MIRA 18:9)

METSIK, R.; TYURKSON, Kh. [Turkson, H.]

Study of corrosion in tar waters by means of the polarization  
curve method. Khim. i tekh. gor. slan. i prod. ikh perer  
(MIRA 18:9)  
no.13:179-189 '64.

METS IK, R.E.; TOMBERG, A.I.

Possibility of improving the quality of oil shale phenols recovered from waste waters. Khim. i tekhn. gcr. slan. i prod. ikh perer no.13:198-202 '64.

Some materials on the corrosion of equipment in the shops for waste water dephenolization. Ibid.:229-237 (MIRA 18:9)

MUSABAYEV, I.K.; METSKAN, Tatyana Il'inichna

[Q fever] Likhoreadka Ku. Tashkent. Gosizdat UzSSR. 1958. 37 p.  
(Q FEVER) (MIRA 12:2)

METSKAN, T. I., Cand Med Sci -- (diss) "Copper metabolism in the organism of patients with epidemic hepatitis." Tashkent, 1960. 12 pp; (Ministry of Public Health Uzbek SSR, Tashkent State Medical Inst); 400 copies; price not given; (KL, 17-60, 171)

SHIFRIN, I.A.; ABRAMOV, B.S.; METSKAN, T.I.

Outbreak of anicteric leptospirosis in the Termez District. Med. zhur.  
(MIM 15:2)  
Uzb. no.6:52-53 Je '60.  
(TERMEZ DISTRICT—LEPTOSPIROSIS)

MUSABAYEV, I.K., prof.; METSKAN, T.I.

Conference on infectious hepatitis at Kiev. Med. zhur. Uzb. no.9:  
(MIRA 15:2)  
79-80 S '61. (HEPATITIS, INFECTIOUS CONGRESSES)

MUSABAYEV, I.K., prof.; METSKAN, T.I., assistant

Some urgent questions in the problem of liver pathology. Med.  
zhur.Uzb. no.3:74-76 Mr '62. (MIRA 15:12)  
(LIVER--DISEASES--PATHOLOGY)

METSKAN, T.I.; KHAMIDOV, G.K.; SULTANOV, Sh.A.; NUGMANOVA, R.N.;  
CHAYKA, G.V., red.; AGZAMOV, K., tekhn. red.

[Clinical and laboratory significance of some metabolic processes in infectious hepatitis] Kliniko-laboratornoe znacherie nekotorykh obmennykh protsessov pri infektsionnom hepatite. Tashkent, Medgiz UzSSR, 1963. 108 p. (MIRA 16:12)

1. Sotrudniki kafedry infektsionnykh bolezney Tashkentskogo instituta usovremenstvovaniya vrachey (for Metskan, Nugmanova). (HEPATITIS, INFECTIOUS) (METABOLISM, DISORDERS OF)

NET KEVITS, L.

SUBJECT USSR / PHYSICS  
AUTHOR MECKEVIC, D.D.  
TITLE Multisection Mechanical Filters.  
PERIODICAL Zurn. techn. fis, 26, fasc. 5, 1113-1125 (1956)  
Issued: 6 / 1956 reviewed: 9 / 1956

CARD 1 / 2

PA - 1330

A two-section mechanical filter is a more progressive system for the stabilization of the velocity of a sound carrier, than a rotating stabilizer, but the oscillations of band velocity can in practice not be reduced to more than from 0,25 - 0,20%. The efficiency of the two-section mechanical filter may be improved with success by different schemes of multisection mechanical filters. Several such schemes will be put into practice by the LENKINAP works.

By means of the method developed by GAMBURCEV it is easy to obtain the equivalent electric scheme of a given filter. In order to be able to increase the efficiency of the filter as much as possible it is necessary to increase the moment of inertia of the flywheel, to diminish the reduced mass of the tension pulleys, to diminish the tension of the springs of the tension pulleys, and, finally, to adjust the tension of the band in such a manner than the band is subjected not to flexual but to tensile stress.

In the case of the system developed here, which is illustrated by a drawing, the tension pulleys are arranged on levers with a common axis. Both pulleys are fitted to a common lever arm, and the band is tightened by a third pulley. Self-oscillations are decelerated by a damper in form of an air- or oil brake. The equivalent electric scheme is composed as usual

Zurn.techn.fis, 26, fasc 5, 1113-1125 (1956) CARD 2 / 2 PA - 1330

. Selection of the angle of application of the tension pulley: The smaller this angle is, the more nonlinear will the system become, this entailing all disadvantages resulting herefrom. Therefore the angle of application of the tension pulley in velocity stabilizers of a kinematic band should be as near  $180^\circ$  as possible.

There follows a report concerning the computation of the spring with a minimum tension for the necessary tightening of the band and concerning the selection of the place where the spring is to be fastened to the pulley lever.

The following conclusions are drawn: The ratio of the lever arms may be an optimum at  $n > 1$ ,  $n = 1$  and  $n < 1$ . Here  $n = \Delta\lambda/l$ ,  $\Delta\lambda$  - deformation of the spring,  $l$  - displacement of the pulley. The optimum value of  $n$  depends largely on the diameter and on the elasticity of the spring, on the displacement of the pulley as well as on other circumstances.

In conclusion the sequence of computations of the spring in the stabilizer of the band velocity is given.

INSTITUTION:

METSKHovRISHVILI, Sh.S.

Some problems on a momentless strained state of a tore-shaped shell.  
(MLRA 8:12)  
Soob. AN Gruz. SSR 16 no.4:263-267 '55.

1. Akademiya nauk Gruzinskoy SSR. 2. Tbilisskiy matematicheskiy in-  
stitut imeni A.M.Razmadze. Predstavлено dastvitel'nym chlenom Akad.  
I.N.Vekua  
(Elastic plates and shells)

✓ METSKHOVRISHVILI, Sh. S.

METSKHOVRISHVILI, SH. S.: "Some problems of themoment-free equilibrium  
of a toroid shell." Published by the Acad Sci Georgian SSR. Acad Sci  
Georgian SSR. Tbilisi Mathematics Inst imeni A. M. Razmadze. Tbilisi, 1956.  
(Dissertation for the degree of Candidate in Sciences).

\*Candidate of Physico-Mathematical Sciences

So: Knizhnaya Letopis', No 36, 1956, Moscow.

SOV/124-58-7-7879

Translation from Referativnyy zhurnal Mekhanika, 1958, Nr 7 p 82 (USSR)

AUTHOR Metskhovrishvili, Sh.S.

TITLE On the Infinitely Small Flexures of a Toroid Shell (O besko-nechno mal'kikh izgibakh toroobraznoy obolochki)

PERIODICAL Soobshch. AN Gruz SSR, 1957, Vol 18, Nr 5, pp 521-527 in Georgian)

ABSTRACT It is known that the problem of an infinitely small flexure of a momentfree shell reduces to the search for the one unknown function V. This function satisfies the second-order partial differential equation and yields the displacement components. This method for solving the problems of infinitely small flexures is applied to the case of a shell having the shape of a torus. It is shown that in a closed toroidal shell the displacements are multivalued. In particular the tangential components of the displacement vector have the form

$$u_1 = a \ell (1 - \epsilon^2)^{1/2} \sin \varphi$$

$$u_2 = a \ell (1 - \epsilon \sin \varphi) \left\{ \cos \varphi - \frac{2\epsilon}{\sqrt{1-\epsilon^2}} (1 - \epsilon \sin \varphi) \tan^{-1} \sqrt{\frac{1-\epsilon}{1+\epsilon}} \tan \frac{\pi}{4} + \frac{\varphi}{2} \right\}$$

Card 1/2

SOV 124-58-7-7879

On the Infinitely Small Flexures of a Toroid Shell

wherein  $\phi$  and  $\theta$  are curvilinear coordinates on the middle surface,  $a$  is the radius of the circumference whose revolution forms the torus,  $R$  is the distance from the center of the circle to the axis of symmetry, and  $E$  is the eccentricity of the torus. Two particular cases are examined 1) an infinitely small flexure of a toroidal shell whose edges are fastened to a plate, and 2) an infinitely small flexure of a toroidal strip whose edges are clamped. The author concludes that in these cases only rigid displacements can be observed, i.e., that an infinitely small flexure does not occur.

O.D. Oniashvili

1. Cylindrical shells--Theory

Card 2/2

SOV/124-58-11 13017

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 166 (USSR)

AUTHOR: Metskhovrishvili, Sh. S.

TITLE: Problems on the Moment free Stressed State of a Toroidal Shell  
(Zadachi bezmomentnogo napryazhennogo sostoyaniya toroobraznoy obolochki)

PERIODICAL: Tr. Tbilissk. matem. in-ta. AN GruzSSR, 1957, Vol 24,  
pp 179-193

ABSTRACT: The moment-free stressed state of a toroidal shell is examined. Several examples are given which demonstrate that a moment-free state of stress is possible in a toroidal shell under certain types of external loading. The author discusses the uniqueness of the solution of three boundary problems on the moment-free state of stress of a circular or elliptical torus. It is shown that the solution of the above problem is unique if a given tangential force, or a combination of a normal and a tangential force, are acting on the boundary. If only a normal force is given, then more than one solution is possible.

Card 1/1

I. N. Danilova

METSKHOVRISHVILI, Sh.S.

Some problems of zero torque stress of an ellipsoidal torus (in Georgian with summary in Russian). Trudy Mat. inst. AN Gruz. SSR 26:227-240 '59. (MIRA 13:6)  
(Elastic plates and shells)

BABAK, V.K.; METSKHVARISHVILI, I.N.; ZHUKOVSKIY, G.V.

Full use of sulphide-magnetite ores from the Ural Mountains. Gor.zhur.  
no.3:3-7 Mr '60. (MIRA 14:5)

1. Uralmekhanobr, Sverdlovsk  
(Ore dressing) (Ural Mountains--Magnetite)

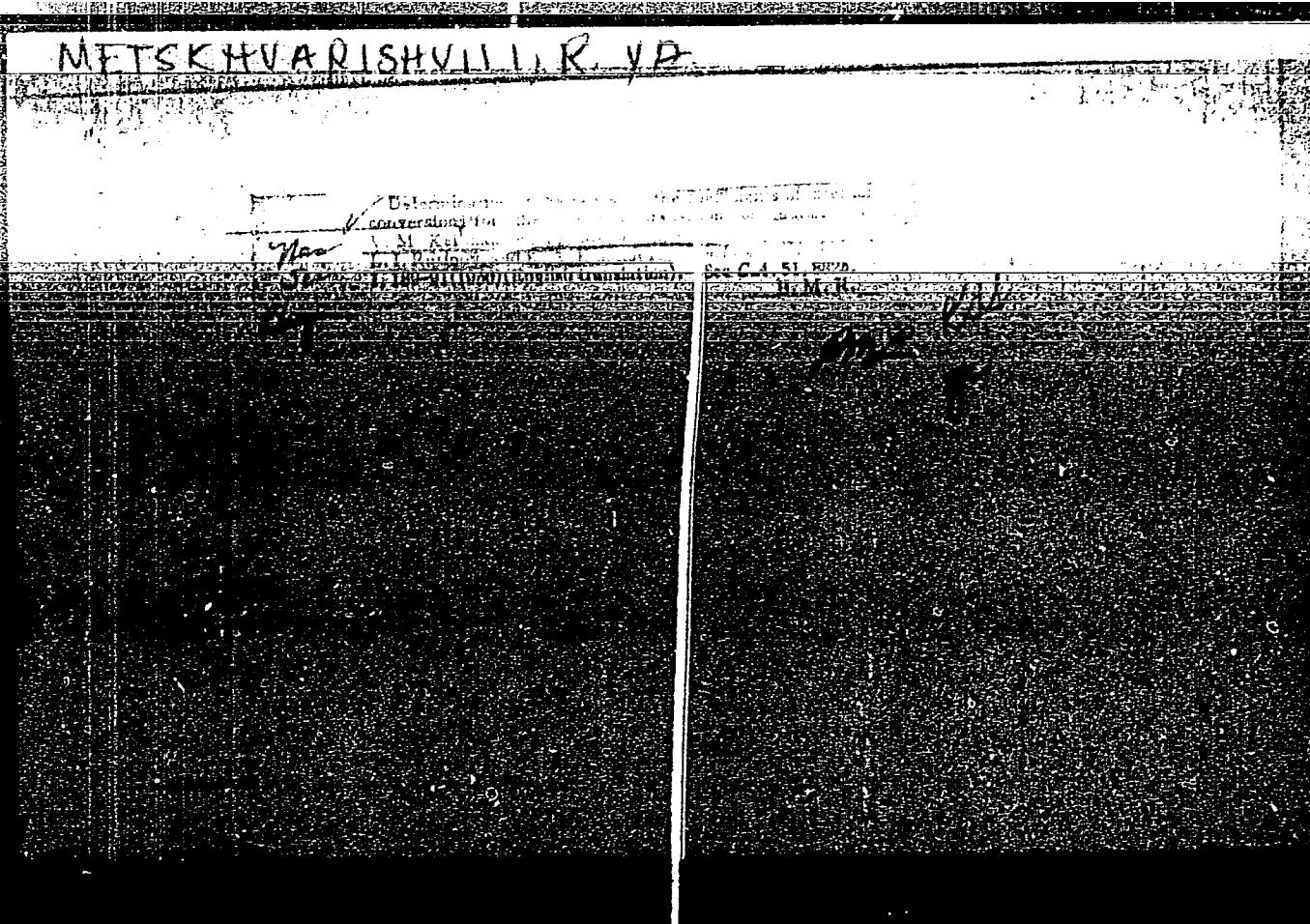
KEL'MAN, V.M.; ROMANOV, V.A.; METSKHVARISHVILI, R.Ya.

Measurement of the internal conversion coefficients for L- and  
M-subshells of ThC. Dokl. AN SSSR 103 no.4:577-579 Ag'55.  
(MLRA 8:11)

1. Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk  
SSSR. Predstavлено академиком A.P.Ioffe  
(Thorium--Isotopes) (Spectrometry) (Nuclear shell theory)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001033720008-7



APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001033720008-7"

The electron level energy differences (in e.v.) of Sm are as follows:  $L_{II} - L_I = 424 \pm 2$ ;  $L_{III} - L_{II} = 697 \pm 1$ ; and  $L_{III} - L_I = 1024 \pm 2$ . In Gd, they are as follows:  $L_{II} - L_I = 443 \pm 4$ ;  $L_{III} - L_{II} = 201 \pm 4$ ; and  $L_{III} - L_I = 1131 \pm 2$ . The ratios of  $L$ -conversion coeffs. are: for Sm (122 e.v.),  $L_{II}/L_I$  as  $1.222 \pm 0.04$ ;  $L_{III}/L_I$  as  $2.16 \pm 0.05$ , and for Gd (123.2 e.v.),  $L_{II}/L_{III}$  as  $1.1209 \pm 0.08$ ;  $L_{III}/L_I$  as  $1.1232 \pm 0.04$ . The transitions can be assigned as  $E2$  by comparison of these ratios with theoretical results of Rose (J. Siegbahn, *Atoms and Gamma Ray Spectroscopy*, 1955 (C.A. 49, 1214g)). The ratio of  $M$ -conversion coeffs. in Sm was found as  $1.04 \pm 0.01$ ;  $M_{II}/M_I$  as  $1.34 \pm 0.1$ ;  $(3.3 \pm 0.2)$ . The ratio of total  $L$ -conversion to total  $M$ -conv. coeffs. in Sm is  $1.1 \pm 0.1$ ;  $L_{II}/M_{II}$  as  $4.5 \pm 0.1$ . The ratios of total  $K$ -conversion to  $M$ -conversion coeffs. are: for Sm (122 e.v.),  $K/L = 1.76 \pm 0.04$ ; for Gd (123.2 e.v.),  $K/L = 1.51 \pm 0.03$ .

R. W. Fink

amf

METSKHVARISHVILI, R. A.

Category : USSR/Nuclear Physics - Structure and Properties of Nuclei

C-4

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 3200

Author : Kel'man, V M , Metskhvarishvili, R.Ya., Romanov, V.A., Rusinov, L.I.,  
Konoplev, K A

Inst : Leningrad Physicotechnical Institute, Academy of Sciences USSR

Title : Determination of the Ratios of the Internal-Conversion Coefficients for  
the Isomeric Transition of In<sup>114</sup>.

Orign Pub : Dokl AN SSSR 156, 107, No 3, 394-397

Abstract : A prism beta spectrometer with a transmission factor .02% and a  
resolution 0.04% was used to measure the ratios of the conversion  
coefficients at various L subshells and also at the K, M, and N  
shells for the Gnev isomeric transition in In<sup>114</sup>. The ratios are  
calculated for the case of a pure E2 transition. The ratio of the  
internal conversion coefficients for the K and L subshells is assumed  
to be 1.0.

Card : 1/1

METSKHVARISHVILI, R.YA.

6

1 -part.  
1 -part

Physics - Tech Sect.

12204

INVESTIGATION OF CONVERSION LINES IN THE  $\beta$ -SPEC-  
TRUM OF  $Pt^{191}$ . N. V. M. Kel'mer, R. Ya. Metskhvarishvili,  
V. A. Romanyuk, and V. V. Tuchkovich (USSR Academy of  
Sciences, Leningrad). Nuclear Phys. 4, 240-7(1957) Aug.

A prism  $\beta$  spectrometer with a resolving power of 0.04%  
was employed to study the conversion electron spectrum of  
excited  $Pt^{191}$  and  $Os^{191}$  produced in the disintegration of  
 $I^{191}$ . The conversion coefficient ratios  $K/L$  and  $L_I : L_{II} : L_{III}$   
have been determined for transition energies 128.3, 201.3,

203.8, 205.0, 308.6, 316.5, 468.0, and 604.5 kev; for the  
most intense transitions the ratios  $K/M$ ,  $M_I : M_{II} : M_{III}$ ,  
 $K/N$  and  $K/O$  have also been determined. All investigated  
transitions were found to be of the E2 or E2 + M1 type.  
The contribution of the M1 admixture has been determined.  
(auth)

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R. I. Metakharishvili

Distr: bE3d

3774

INVESTIGATION OF CONVERSION LINES IN THE  $\beta$ -SPECTRUM OF A  $\text{Eu}^{131}$ - $\text{Eu}^{144}$  MIXTURE. V. M. Kel'man,  
V. A. Romanov, R. Ia. Metakharishvili, and V. A. Molchanov  
(USSR Academy of Sciences). Soviet Phys. JETP 5, 24-30  
(1957) Aug.

Interval conversion lines in the K shells and L and M subshells of  $\text{Sm}^{131}$  and  $\text{Cd}^{144}$  were measured with a high resolution  $\beta$  spectrometer. The ratios of the conversion coefficients were determined for 122 and 123.2 kev transitions. The energy intervals between the conversion lines were measured with high precision. (auth)

9  
1-RML

METSKHVARISVILI, N / C

AUTHOR: KEL'MAN, V.M., ROMANOV, V.A., MECCHVARISVILI, R.JA., PA - 2057  
KOLJUNOV, V.A.

TITLE: Investigation of Conversion Lines in the  $\beta$  Spectrum of an Eu<sup>152</sup>,  
Eu<sup>154</sup> Isotopic Mixture. (Issledovanie konversionnykh linij v  
 $\beta$ -spektre smesi isotopov Eu<sup>152</sup> i Eu<sup>154</sup>, Russian).

PERIODICAL: Zhurnal Eksperimental'noi i Teoret. Fiziki, 1957, Vol 32, Nr 1,  
pp 39-47 (U.S.S.R.)

Received: 3 / 1957    Reviewed: 4 / 1957

ABSTRACT: The authors recorded the lines of the inner conversion on the  
K shells as well as on the L- and M-subshells of the Sm<sup>152</sup> and  
Sm<sup>154</sup> by means of a prism- $\beta$ -spectrometer of great resolving ca-  
pacity and determined the ratios of the conversion coefficients  
at the energies 122 and 123,2 keV of the transitions. The re-  
solving capacity of the prism spectrometer used here was in-  
creased by the following measures: 1) Shielding of the tubes of  
the spectrometer against extraneous magnetic fields by iron  
rings. 2) The straight gap of the registering device was re-  
placed by a slightly curved gap. 3) A certain modification of  
the feeding of the magnet and of the lens of the spectrometer.  
The L-subshells of the Sm<sup>152</sup> and Gd<sup>154</sup>: A diagram demonstrates  
the sphere of the  $\beta$ -spectrum of a  $\beta$ -spectrum of Eu<sup>152</sup> and Eu<sup>154</sup>

Card 1/3

PA - 2057

Investigation of Conversion Lines in the  $\beta$  Spectrum of an  
 $\text{Eu}^{152}$ ,  $\text{Eu}^{154}$  Isotopic Mixture.

with those lines that were produced by the electrons of the inner conversion of the  $\gamma$ -rays with the energies 122 and 123,2 keV on the subshells of the  $\text{Sm}^{152}$  and  $\text{Gd}^{154}$ . The conditions under which the lines were obtained as well as the behavior of the lines are discussed. The theoretical ratios of the conversion coefficients agree with the here measured ratios.

The M-subshells of samarium: A further diagram demonstrates the sphere of the  $\beta$ -spectrum with the lines which are produced by the inner conversion on the M-subshell of samarium. The authors found the following ratio of the coefficients of the conversion on the M-subshells:  $M_I : M_{II} : M_{III} = 1 : (3,4 \pm 0,1) : (3,3 \pm 0,2)$ . This corresponds to the conclusions from the approximated calculations of the relative conversion coefficients. Furthermore  $L/M = 4,5 \pm 0,1$  ( $L = L_I + L_{II} + L_{III}$ ;  $M = M_I + M_{II} + M_{III}$ ) was found.

Card 2/3

PA - 2057

Investigation of Conversion Lines in the  $\beta$  Spectrum of an  
 $\text{Eu}^{152}$ ,  $\text{Eu}^{154}$  Isotopic Mixture.

The measurement of the ratios of the coefficients of the conversion on the K- and L-subshells of Sm and Gd: The K-lines  
 $\text{Sm}^{152}$  and  $\text{Gd}^{154}$  corresponding to the transition energies indicated above are demonstrated in a diagram. The energy difference of these conversion lines is measured by transfer of the electric shift to the sources and amounts to "117+1 eV. Taking into account all measurings, the following values were found for the conversion coefficients: For Sm (transition energy 122 keV):  
 $K/L = 1,76 \pm 0,04$  and for Gd (transition energy 123,2 keV):  
 $K/L = 1,51 \pm 0,03$ .

ASSOCIATION: Leningrad Physical-Technical Institute of the Academy of Sciences of the USSR.  
PRESENTED BY:  
SUBMITTED:  
AVAILABLE: Library of Congress.  
Card 3/3

METSKHVARISHVILI, R. Y.

AUTHORS: Kel'man, V.M., Metskhvarishvili, R.Ya., Romanov, V.A. 56-3-6/59  
Tuchkevich, V.V..

TITLE: The Investigation of Conversion Lines in the  $\beta$ -Spectrum of Ir<sup>192</sup>.  
(Issledovaniye konversionnykh liniy v  $\beta$ -spektre Ir<sup>192</sup>)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 3, pp.588-594  
(USSR)

ABSTRACT: With the help of a prism- $\beta$ -spectrometer (resolving of 0,04 %) the conversion coefficients and the multipole order of the following  $\beta$ -lines were determined:

| E $\uparrow$ in KeV | K/L             | K/M            | multipole order                     |
|---------------------|-----------------|----------------|-------------------------------------|
| 136,3               |                 |                | (80 $\pm$ 1)% E2 + (20 $\pm$ 1)% M1 |
| 201,3               | 1,85 $\pm$ 0,04 |                | (86 $\pm$ 2)% E2 + (14 $\pm$ 2)% M1 |
| 205,8               | 1,83 $\pm$ 0,04 |                | E2                                  |
| 295,8               | 2,35 $\pm$ 0,04 | 8,9 $\pm$ 0,2  | E2                                  |
| 308,5               | 2,38 $\pm$ 0,02 | 9,5 $\pm$ 0,2  | (97 $\pm$ 2)% E2 + (3 $\pm$ 2)% M1  |
| 316,5               | 2,22 $\pm$ 0,02 | 9,3 $\pm$ 0,2  | E2                                  |
| 468,0               | 3,0 $\pm$ 0,1   | 10,2 $\pm$ 0,2 | E2                                  |
| 604,5               | 4,7 $\pm$ 0,1   |                | (88 $\pm$ 2)% E2 + (12 $\pm$ 2)% M1 |

Card 1/2

21(3)

SOV/86-30-5-31/56

AUTHORS: Kel'man, V. M., Tetskhvarishvili, R. Ya., Preobrazenskii, P. E., Romanov, V. A., Tschkevich, V. V.

TITLE: The Investigation of the Spectrum of Conversion Electrons of the Isotopes of Lutetium with Neutron Deficit (Issledovaniye spektra konversionnykh elektronov neutronodefitsitnykh izotopov lyutetsiya)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1309-1310 (USSR)

ABSTRACT: The investigation of the radiation of greatly deformed nuclei furnishes material for the further development of the collective nuclear model. It is just from this point of view that the isotopes of lutetium are of interest. Recently several papers (Refs 1-4) have been published which deal with lutetium isotopes with neutron deficit, but the data given by these papers do not convey a clear idea of the decay of these isotopes. Additional investigations are therefore necessary. The authors of the present paper investigated the conversion spectrum of the isotopes of a lutetium fraction, which had been separated from a tantalum target irradiated with fast (660 MeV protons. The method employed for separation has already been

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SOV/56-35-51/56

The Investigation of the Spectrum of Conversion Electrons of the Isotopes  
of Lutetium With Neutron Deficit

described (Ref 5). Measurements were carried out by means of a prism- $\beta$ -spectrometer and by means of a double-focusing spectrometer. The spectrum of the conversion electrons consists of many lines, which belong to Lu<sup>169</sup> (half-life ~1.5 days), Lu<sup>170</sup> (~2 days), Lu<sup>171</sup> (~8 days), Lu<sup>172</sup> (~6.7 days), Lu<sup>173</sup> (~200 days). Belonging of lines to the various corresponding isotopes was determined from the half-life. A table gives the energies of  $\gamma$ -transitions the conversion lines of which decrease with the period ~1.5 to 2 days. The second table contains the energies of the  $\gamma$ -transitions with the period 6.7 to 8 days. The energy of these transitions was determined from the energy of K- and L-conversion lines. There are 2 tables and 6 references, 4 of which are Soviet.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk  
SSSR(Leningrad Physico-Technical Institute of the Academy  
of Sciences, USSR)  
Card 2/3

21(1)

SOV/56-3-7/71

AUTHORS: Kel'man, V. M., Metskhvarishvili, R. Ya.

TITLE: Exact Measurement of the Ratios of the Internal Conversion Coefficients of  $\gamma$ -Quanta With Energies of 411.8 kev in  $Hg^{198}$  (Tochnoye izmereniye otnosheniy koeffitsiyentov vnutrenney konversii  $\gamma$ -kvantov s energiyey 411.8 keV v  $Hg^{198}$ )

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 3, pp 694-696 (USSR)

ABSTRACT: In the present paper the authors publish the results obtained by measurements of the ratios of the internal conversion coefficients carried out by means of a  $\gamma$ -spectrometer with sufficient resolving power. As already shown (Refs 1-3), electric quadrupole radiation (E2) is concerned in the case of the 411.8 kev  $\gamma$ -quanta emitted by excited  $Hg^{198}$  nuclei. Figure 1 shows the inner conversion lines of  $\gamma$ -quanta on the L-subshells of  $Hg^{198}$ , figure 2 shows the same for the K, N and O shells, and figure 3 shows the conversion lines on K, L, M, N and O shells of  $Hg^{198}$ , recorded by means of a spectrometer with double focusing. Results: K/L =  $2.69 \pm 0.02$

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SCV/56-36-3-7/71

Exact Measurement of the Ratios of the Internal Conversion Coefficients of  
 $\gamma$ -Quanta With Energies of 411.8 kev in Hg<sup>198</sup>

$$L_I : L_{II} : L_{III} = 1 : (1.05 \pm 0.02) : (3.4 \pm 0.1)$$

$$L : M : N : O = 1 : (0.252 \pm 0.004) : (0.077 \pm 0.004) : (0.013 \pm 0.002)$$

A table lists conversion coefficient ratios ( $E_\gamma = 411.8$  in  
Hg<sup>198</sup>) which are taken from references 1, 2, 3, 7, 8, 9, and  
from the present paper. There are 3 figures, 1 table, and  
9 references, 5 of which are Soviet.

ASSOCIATION: Leningradskiy fiziko-tehnicheskiy institut  
(Leningrad Physico-Technical Institute)

SUBMITTED: July 29, 1958

Card 2/2

• 21(7)

AUTHORS: Kel'man, V. M., Metskhvarishvili, R.Ya., SOV/56-37-3-8/62  
Preobrazhenskiy, B. K., Romanov, V. A., Tuchkevich, V. V.

TITLE: The Multipolarities of  $\gamma$ -Transitions in  $Tm^{169}$

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,  
Vol 37, Nr 3(9), pp 639-642 (USSR)

ABSTRACT: The  $\gamma$ -spectrum and the spectrum of the conversion electrons of excited  $Tm^{169}$ -nuclei has already been investigated by several authors. In the present paper the level scheme of the considerably deformed  $Tm^{169}$ -nucleus and its particular characteristics are first discussed (Fig 1, Ref 4). In the following, the authors give several results obtained by measurements of the ratios of  $\gamma$ -conversion coefficients to the L-subshells of  $Tm^{169}$  ( $E_{\gamma} = 63, 94, 110, 130.5, 177$ , and 198 kev). Further, the multipolarities of the transitions were determined and for mixed radiations the percentage of the components was determined. The intensities of the conversion lines were measured by means of  $\beta$ -spectrometers. As a source a thin  $Yb^{169}$ -layer on an aluminum foil was used.

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The Multipolarities of  $\gamma$ -Transitions in Tm<sup>169</sup>

SOV/56-37-3-8/62

The production of this source is described in detail: A tantalum target was irradiated with 680 mev protons on the synchrocyclotron of the Ob"yedinenyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research); The rare-earth elements produced were separated by ion exchange (using the cationite KU-2) and subjected to a process of preparation which is described. Finally, a Lu-fraction (Lu<sup>169</sup>) was obtained on the aluminum foil, which goes over into Yb<sup>169</sup> with a half life of ~2d. Figure 2 shows the conversion lines of 177 kev  $\gamma$ -quanta onto the L-subshells of Tm<sup>169</sup>, and figure 3 shows the same for 198 kev  $\gamma$ -quanta. In both cases also the L<sub>II</sub>- and L<sub>III</sub>-maxima are distinctly marked beside the steep L<sub>I</sub>-peak. The results obtained by these investigations are shown in a table. Thus, the following was e.g. obtained for the 177 kev transition:  
 $L_I : L_{II} : L_{III} = 1 : (0.24 \pm 0.01) : (0.137 \pm 0.006)$ ;  $L_{II}/L_I : 82\% M1 + 18\% E2$ ,  $L_{III}/L_I$ : the same mixture.

Card 2/3

The Multipolarities of  $\gamma$ -Transitions in Tm<sup>169</sup>

SOV/56-37-3-8/62

For the 198 kev transition the following is given:  
 $L_I : L_{II} : L_{III} = 1 : (0.135 \pm 0.002) : (0.063 \pm 0.001)$ ;  $L_{II} / L_I = 93\% M_1 + 7\% E_2$ ,  $L_{III} / L_I = 90\% M_1 + 10\% E_2$ . There are 3 figures, 1 table, and 15 references, 8 of which are Soviet.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR  
(Leningrad Physico-technical Institute of the Academy of Sciences, USSR)

SUBMITTED: April 9, 1959

Card 3/3

"Soviet Union, . . . , and the U.S.S.R. —  
the Soviet Union,  
"Kirov's Death," Tbilisi, 1960, 15 pp, 150 cop. (Tbilisi State U  
in Stalin) (KL, 45-60, 122)

- 715 Бирюзова Татьяна Валентиновна. Административное дело № 145. Фактический адрес: Ульяновская ул., д. 93, кв. 114. Зав. 1930, 18.2.
- 716 Бетта Ивана Несторовича. Родственник Марии Сидоровой. Семья 1937 года. Зав. 1935, 5.6.
- 717 Габазаке Николая Аксакова. Примечание: подозреваемый. Зав. 1930, 10.3.
- 718 Гаврилова Константина Афанасьевича. Примечание: подозреваемый. Зав. 1930, 12.
- 719 Герасимова Татьяны Георгиевны. О приватизациях имущества Краснодара. Крым. 1931. Всего 14. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 720 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 721 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 722 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 723 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 724 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 725 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 726 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 727 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 728 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 729 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 730 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.
- 731 Георгиадзе Николая Афанасьевича. Крым. 1931. Всего 11. Сводка АН РСФСР, т. 15, № 10 Зав. 1935, 10.3.

Def. at  
Tbilisi date U.  
CIA-RDP86-00513R001033720008-7

Disposition for Agency or  
Contractor Reference Name Date

METSOV, P.G.

Organizing an open department. Zhur. nevr. i psikh. 62 no.5:  
794-795 '62.  
(MIRA 15:6)  
(PSYCHIATRIC HOSPITALS)

METSUGOV, V.Kh.

Force couple bending of an elongated prismatic beam composed of various elastic materials. Soob. AM Gruz. SSR 14 no.8:459-465 '53.  
(MLRA 7:5)

1. Gruzinskiy politekhnicheskiy institut im. S.M.Kirova, Tbilisi.  
Predstavлено академиком Н.И.Мусхелишвили. (Elasticity)

SOV/124/57-3-3389

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 3, p 108 (USSR)

AUTHOR: Metsugov, V. Kh.

TITLE: On the Problem of the Bending by a Transverse Force of a Tensioned Prismatic Girder Composed of Various Elastic Materials (K zadache izgiba poperechnoy siloy rastyanutogo prizmaticheskogo brusa, sostavленного из различных упругих материалов)

PERIODICAL: Tr. Gruz. politekhn. in-ta, 1956, Nr 1 (42), pp 89-98

ABSTRACT: The paper analyzes the combined effect of the bending by a transverse force and simultaneous tension in a composite prismatic girder on the premise of nonlinear elasticity. It is assumed that the girder consists of a number of solid parallel rods that do not touch one another but are surrounded on the outside by an elastic medium. The lateral surface of the girder is free from external forces, and the components of the displacement vector remain continuous. The author reduces the solution of the stated nonlinear problem by means of the small-parameter method to the determination of five functions which satisfy Poisson's equations, the biharmonic equation, and certain specified conditions at the cross-section perimeter as well as at the division

Card 1/2

On the Problem of the Bending by a Transverse Force (cont.)

SOV/124/57-3-3389

lines of the inner regions corresponding to the cross sections of the component rods. The components of the stress tensor and the displacement vector are determined by means of the functions introduced.

A. K. Rukhadze

Card 2/2

SOV 124-58-7-7866

Translation from Referativnyy zhurnal Mekhanika 1958 Nr 7 p 80 (USSR)

AUTHORS Gorgidze A Ya Metsugov V Kh

TITLE On the Secondary Effects of the Tension bending of Naturally Twisted Composite Girders by a Force Couple (O vtorichnykh effektakh v zadachakh rastyazheniya i izgiba parov s dvustvenno zakruchennykh sostavnykh brus yev)

PERIODICAL Tr Gruz politekhn inst 1957 Nr 4 (52) pp 63-80

ABSTRACT The second-order theory of elasticity is used to examine the problem of the secondary effects that arise when naturally twisted composite girders are subjected by a force couple to tensile and flexural stresses. It is assumed that the materials comprising a girder have the same Poisson ratio but different moduli of elasticity. Using the methods of the nonlinear theory of elasticity, also the method of introducing a small parameter (see Izv AN SSSR, Otd. tekhn n 1938 Nr 8 and 9), the authors reduce the problems stated in the linear theory of elasticity to the problems of the deformation of a composite prismatic girder being acted upon by specified body and surface forces. In addition, the resulting linear three-dimensional

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SOV 124 58 7-7866

On the Secondary Effects of the Tension-bending (cont.)

problems are further reduced to boundary problems (a single boundary problem in the case of tensile stresses, six boundary problems in the case of the flexural stresses produced by a couple) all having reference to a composite plane area (e.g., a cross section of the girder). The solvability of these boundary problems is demonstrated. However, in the problem of the flexural stresses produced by the force couple the calculated displacement components do not remain continuous across the interfaces between the various materials of which the girder is composed. It should also be noted that in the second-order theory of elasticity the terms beyond the second order of smallness with respect to  $k$  are disregarded. In addition, the parameter  $k$  is assumed to be small (the squares and higher powers thereof being discarded), for which reason it is not clear why the terms of the order of  $k^{-2}$  are retained.

A K Rukhadze

1. Girders--Analysis of the Secondary Effects of the Tension-bending

Card 2/2

METSUGOV, V.Kh.

Secondary effect of the bending by a pair of beams with slightly bent axes. Trudy GPI [Gruz.] no.6:113-122 '61. (MIRA 16:4)  
(Beams and girders) (Deformations (Mechanics))

METSYANU, Andrey [Metianu, Andrei], fnzh.

The Vula steam generator. Teploenergetika id no. 6:20-28 (e 165,

1. Zavod "Vulkan" Rumyanskoy Narodnoy Respublikи.

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720008-7

KENT, A. J.

Visional perception of speech in the presence of a visual distracter. (Abstract)

1. Defense Department

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001033720008-7"

1. METT, B.Yu.

X-ray investigation of electrolytic zinc deposition G. F. Komolapov and B. Yu. Mett. *J. Tech. Phys. (U. S. S. R.)* 9, 1421-4 (1939).—The anisotropy of Zn deposited from a cyanide bath increases with c. d. between 1 and 7 amp./sq. dm. and with the thickness of the deposit; it decreases with rising temp. and c. d. between 7 and 14 amp./sq. cm. It is lowered by stirring and not affected by addition of glycerol. The luster of Zn deposits increases with their anisotropy T. I. Bikerman

METT, B. Yu

1/Mu

3

(2) *Causes of the influence of molybdenum on the kinetics of the isothermal decomposition of austenite.* B. Yu. Mett and R. I. Entin, Doklady Akad. S.S.R.S., 68, No. 4 (1949).—Mo is the most effective alloying element in decreasing the rate of austenite decompr. to pearlite. At 800° it decreases the rate by a factor of 25,000. However, below 650° Mo has little effect on the rate of decompr. The slowest of the following processes is rate detg.: (1) change of Fe atoms from the  $\gamma$  lattice to that of  $\alpha$  and carbide; (2) C diffusion; (3) Mo diffusion. Although up to 1% Mo does not appreciably affect the rate of transformation of Fe, at 640° 0.7% Mo lowers the rate of growth of eutectoid steel by a factor of 2,000. The activation energy of the rate of growth in this steel is about 80,000 cal./g. atom, nearly the same as that for the diffusion of Mo in austenite, 59,000. Just below the  $A_1$  temp. the alloy carbide may be the only stable phase, while at lower temps. a metastable carbide, such as  $Fe_3C$ , may be able to form. To test this theory, the carbides of the steel C 0.68%, Si 0.24, Mn 0.49, Mo 0.65% were sepd. electrolytically and were analyzed by the Debye x-ray method with Fe radiation and 8 hrs. exposure. Specimens 50 mm. long and 14 mm. in diam. were heated in a salt bath at 650° for 8-10 min. and were transferred to a lead bath at the desired temp. and were held for a sufficient time to allow initial carbide ptn. as detd. by a hardness test. 0.1 N HCl was the electrolyte, the c.d. was 0.01-0.03 amp./sq. cm., and the time of electrolysis did not exceed 2-3 hrs. For holding times in the lead bath of about 4 hrs. and for temps. up to 570°,  $Fe_3C$  was found. At higher temps. and for holding times of 1.5 to 4 hrs., the carbide was  $(Fe, Mo)_3C$ . A specimen quenched from 650° to 650° for 10 min. and then held at 620° for 3 hrs. showed  $Fe_3C$ . Thus, the equil. temp. for  $Fe_3C$  formation lies close to but above 620°, and the rate of formation of the alloy carbide is faster at 630° and 600° than is that of  $Fe_3C$ . A similar expt. but with holding at 680° for 2.5 hrs. showed  $Fe_3C$  and alloy carbide. A. G. Guy

*Inst. Metallogr., Central Sci. Res. Inst. Ferrous Metals*

*valuation B-60429*

METT, B.YU.  
LA

7

Carbide formation in the isothermal decomposition of austenite in chromium steels. B. Yu. Mett and R. I. Entin. Doklady Akad. Nauk S.S.R. 72, 497 (1957). cf. C.A. 44, 4845a. Steels contg. 4, 8, and 12% Cr were studied to det. the carbides that formed at temps. slightly below  $A_1$ . The steel bars were homogenized for 15 hrs at 1200° and then forged. The decarburized layers were removed, and bars 30 mm. long and 12 mm in diam. were prep'd. Austenitization was done in a furnace at 1200° for 8 min., and the bars were then placed in a lead bath for a time sufficient for the first stage of isothermal decompr. of the austenite, and the bars were finally water quenched. Debye x-ray patterns were used to identify the electrolytically sepd. carbides. Steel Kh-10 (C 0.47, Mn 0.48, Si 0.77, Cr 16.2) contained the equil. cubic carbide  $(Cr,Fe)_3C$  after treatments at 770 to 700° for 1 to 5 hrs. At 700° the carbide contained 65% Cr. At 650° and lower a mix. of the cubic and the trigonal carbide,  $(Cr,Fe)_2C_3$ , was formed initially. On prolonged treatment (5 hrs. at 650°) the metastable trigonal carbide almost completely changed to the cubic carbide. Steel Kh-8 (C 0.47, Mn 0.69, Si 0.11, Cr 8.37) and steel Kh-4 showed only the equil. trigonal carbide after treatments at temps. of 650° and higher. At 725° the carbide contained 55% Cr. Steel Kh-4 (C 0.33, Mn 0.6, Si 0.42, Cr 3.87) showed a mix. of trigonal carbide and  $(Fe,Cr)_2C$  after treatment at 400° for 1 hr followed by 1.5 hrs at 700°.

A. G. Guy

KHET, B.Yu.; KETIN, R.I., kand. tekhn. nauk.

Reasons of the effect of molybdenum on kinetics of isothermal  
dissociation of austenite. Probl. metalloved. i fiz. met. no.2:  
188-192 '51. (MIRA 11:4)  
(Iron-molybdenum alloys--Metallography)

МЕРГ, Б.И.; МЕТИН, Р.И., канд. техн. наук

Carbide formation during isothermal dissociation of austenite  
in chromium steels. Пробл. металловед. i fiz. met. no.2:193-203  
'51. (MIRA 11:4)

(Chromium steel—Metallurgy)

METT G.Ya

25(5)

(p3)

PHASE I BOOK EXPLOITATION

SOV/1314

Moskovskiy dom nauchno-tekhnicheskoy propagandy imeni F.E.  
Dzerzhinskogo

Opredeleniye proizvodstvennykh moshchnostey v mashinostroyenii  
(Determining Productive Capacities in Machinery Manufacturing)  
Moscow, Mashgiz, 1957. 185 p. 8,000 copies printed.

Additional Sponsoring Agency: Obshchestvo po rasprostraneniyu politi-  
cheskikh i nauchnykh znanii RSFSR.

Ed.: Voskresenskiy, B.V.; Tech. Ed.: Uvarova, A.F.; Managing Ed.  
for Literature on the Economics and Organization of Production  
(Mashgiz): Saksaganskiy, T.D.

PURPOSE: This collection of articles is for engineering and tech-  
nical personnel of manufacturing plants and national economic  
councils.

Card 1/4

Determining Productive Capacities (Cont.)

SOV/1314

COVERAGE. This collection of articles explains the methodology and practice employed in determining the productive capacities of machinery manufacturing establishments and discusses the discovery and utilization of untapped productive capacities. Material included in this collection of articles was presented and discussed at the second scientific and technical conference on exchange of experience in the field of dealing with the methodology and actual determination and utilization of productive capacities in Soviet machinery manufacturing plants, convened in December of 1955 by the Moskovskiy dom nauchno-tehnicheskoy propagandy imeni F.E. Dzerzhinskogo (Moscow House imeni F.E. Dzerzhinskogo for Dissemination of Scientific and Technical Data). There are no references. No personalities are mentioned.

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Determining Productive Capacities (Cont.) SOV/1314

- Kozlov, F V , Engineer, and B.I. Smirnov, Engineer.  
Methods of Determining the Productive Capacity of  
Shipyards 134
- Khesin, Ya I. Experience of the Moscow Automobile Plant  
Imeni I.A. Likhachev in Calculating and Discovering  
Unused Productive Capacities 164
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Machinery in Calculating and Discovering Unused Pro-  
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Capacities 176

AVAILABLE: Library of Congress (ID 9705 R92M64)

JG/atr  
3-20-59

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## PHASE I BOOK EXPLOITATION

SOV/1313

Mett, Georgiy Yakovlevich, and Nikolay Mikhaylovich Yur'yev

Planirovaniye na mashinostroitel'nom zavode (Planning in a Machine Manufacturing Plant) Moscow, Mashgiz, 1957. 243 p. 11,000 copies printed.

Reviewers: Busyatskaya, L.A., Engineer, and A.R. Sochinskiy, Engineer;  
Ed.: Boginskiy, M.N., Economist; Ed. of Publishing House:  
Salyanskiy, A.; Tech. Ed.: Matveyeva, Ye. N.; Managing Ed. for  
Literature on the Economics and Organization of Production (Mashgiz):  
Saksaganskiy, T.D.

PURPOSE: This is a textbook for technical schools approved by the Scientific Council for Professional and Technical Education of the Main Administration of Labor Reserves.

COVERAGE: The textbook outlines basic concepts of methodology, draws inferences from the technical and economic planning experience of

Cari 1A

METT, G.Ya.

School of advanced methods of industrial management. Mashinostroitel'  
no. 5:45 My '60. (MIRA 14:5)

1. Predsedatel' Komiteta ekonomiki, planirovaniya i organizatsii  
proizvodstva Tsentral'nogo pravleniya nauchno-tehnicheskogo  
obshchestva mashinostroitel'noy promyshlennosti.  
(Industrial management--Study and teaching)

METT, G.Ya.

Operational and production planning should be on the level of new  
objectives. *Mashinostroitel'* no.8:42 Ag '60. {MIRA 13:9}  
(Factory management)

SITNIN, V.K., red.; BARNGOL'TS, S.B., red.; BYCHKOV, P.S., red.;  
MARGULIS, A.Sh., red.; METT, G.Ya., dots., red.; KAZANTSEV, A.I.,  
red.; SYCHEV, N.G., red.

[Organization and methods for the economic analysis of the work  
of enterprises; transactions] Organizatsiia i metody ekonomiche-  
skogo analiza raboty predpriiatii; trudy. Moskva, Gosfin-  
izdat, 1963. 663 p. (MIRA 17:4)

1. Vsesoyuznoye nauchno-tehnicheskoye soveshchaniye po or-  
ganizatsii i metodike ekonomiceskogo analiza raboty pro-  
myshlennykh predpriatiy. 1st, Moscow, 1963. 2. Predsedatel'  
Komiteta ekonomiki i organizatsii proizvodstva tsentral'nogo  
pravleniya Nauchno-tehnicheskogo obshchestva mashino-  
stroitel'noy promyshlennosti (for Mett).

METT, G.Ya.

Determining the standard of technical and organizational  
development of an enterprise. Vest.mashinostr. 44 no.3:72-78  
Mr '64. (MIRA 17:4)

SOLDIKIN, A. V., and V. I. Sviridov; MIKONOV, V. F., rezensent;  
[S. A. Solikin, V. I. Sviridov, V. F. Mikonov, red.]

[Physical and economic principles of the heat treatment  
of metals] Tekhnicheskie i ekonomicheskie osnovy termi-  
cheskoj obrabotki metallov. Moskva, Mashinos'roenie,  
1965. 450 p. (MIA 1841)

L 23835-65 EWT(d)/EWT(m)/EPF(c)/EPF(v)/ENP(j)/ENP(k)/ENP(h)/ENP(l) Pe-4/Pf-4/  
ACCESSION NR: AP4049442 Pr-4 RM 8/0318/64/000/007/0036/0039 281  
371  
B

AUTHOR: Petrov, A. P., Mett, M.S.

TITLE: Automation of a unit for the concentration of divinyl

SOURCE: Neftepererabotka i neftakhimiya, no. 7, 1964, 36-39

TOPIC TAGS: divinyl concentration, automation, chemisorption, synthetic rubber, automatic control system

ABSTRACT: A commercial unit for the concentration of divinyl by the method of chemisorption with copper-ammonium salts was studied in order to automate it. The divinyl obtained was 95-97% pure; its content of waste gases was not over 2%. For use in rubber manufacture, however, divinyl must be 98% pure. The automatic control system shown in Fig. 1 of the Enclosure was proposed, using the solubility of divinyl (3.6-4.0% by weight) as the control parameter. The system operates as follows: The consumption of butylene-divinyl fraction is measured by G<sub>1</sub>, its readings are transmitted to R<sub>1</sub> which acts on the operating mechanism U<sub>1</sub> situated in the line of the butylene divinyl fraction. From G<sub>1</sub>, the pulse is multiplied by M<sub>1</sub> by the divinyl content <sub>1</sub> in the fraction and transmitted to B<sub>Y</sub>. The loop in the divinyl-return line operates similarly (the designations are, respectively,

Card 1/3

L 23835-65

ACCESSION NR: AP4049442

G<sub>2</sub>, R<sub>2</sub>, U<sub>2</sub>, 2). Orig. art. has: 1 figure and 2 formulas

ASSOCIATION: NIPI: "Neftekhimavtomat"; Azerb. institut nefti i khimii (Azerbaijan  
Institute of Petroleum and Chemistry)

SUBMITTED: 00

ENCL: 01

SUB CODE: IE, MT

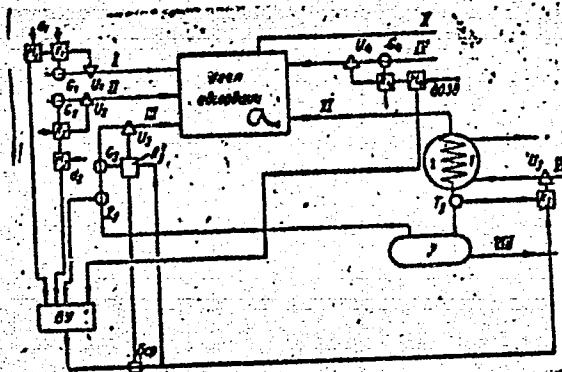
NO REF SOV: 002

OTHER: 000

Card 2/3

L 23835-65  
ACCESSION NR: AP4049442

ENCLOSURE: 01



Flows: I - butylene-divinyl fraction; II - divinyl-return; III - divinyl recycle; IV - desorbed absorption solution; V - non-absorbed hydrocarbons; VI - saturated absorption solution; VII - steam; VIII - absorption solution for desorption.

Figure 1.

Diagram of automatic control of a recycle divinyl feed: 1 - steam preheater  
2 - preliminary desorption tank  $G_1 - G_4$  - flow gages;  $R_1 - R_4$  - regulators;  $M_1, M_2, M_3, M_4$  - multiplying devices;  $\alpha_1, \alpha_2, \alpha_3$  - divinyl content;  $T_3$  - temperature pickup;  $H_1 - H_4$  - operating organs;  $By$  - calculating device;  $Dcp$  - comparison block  
a - absorption unit.

Card 3/3

DROZDETSKIY, Vasilii Vasil'yevich; KETT, Yu.F., redaktor; INOZHMTSEVA, A.I.,  
redaktor izdatel'stva; KUZ'MIN, G.M., tekhnicheskij redaktor

[Handbook in mathematics for schools of topography] Posobie po  
matematike dlia topograficheskikh tekhnikumov. Moskva, Izd-vo  
geodesicheskoi lit-ry, 1956. 362 p. (MLRA 10:2)  
(Mathematics) (Surveying)

AMG 51

USSR/Radio - Railroads  
Communications  
Antennas

"Radio in Railroad Transportation," N. Mettas,  
"Radio in Railroad Transportation," N. Mettas,  
Stalin Prize Winner, Chief, Radio Communications,  
Div., Main Adm of Signalling and Communications.  
Min of Transp USSR

"Radio" No 8, pp 10, 11

Describes wired radio systems used on passenger  
trains and in railway stations; 600 stations and  
over 600 trains have already been equipped with  
these systems.

194105

AMG 51

USSR/Radio - Railroads (Contd)

Describes wired radio systems used on passenger  
trains and in railway stations; 600 stations and  
over 600 trains have already been equipped with  
these systems.

194105

AMG 51

194105

541 N. CALIFORNIA

BRYLEVYEV, A.M., laureat Stalinskoy premii, inzhener; GAMBURO, Ye.Yu., inzhener, retsenzent; GOLOVKIN, M.K., inzhener, retsenzent; KAZAKOV, A.A., kandidat tekhnicheskikh nauk, retsenzent; KUT'IN, I.M., dotsent, kandidat tekhnicheskikh nauk, retsenzent; LEONOV, A.A., inzhener, retsenzent; SEMENOV, N.M., laureat Stalinskoy premii, inzhener, retsenzent; CHERMYSHEV, V.B., inzhener, retsenzent; VALUYEV, G.A., inzhener, retsenzent; MOVIMETTAS, N.A., laureat Stalinskoy premii, inzhener, retsenzent; MOVIKOV, V.I., dotsent, retsenzent; PIVOVAROV, A.L., inzhener, retsenzent; POGODIN, A.M., inzhener, retsenzent; KHODOROV, L.R., inzhener, retsenzent; PIVOVAROV, A.L., inzhener, retsenzent; POGODIN, A.M., inzhener, retsenzent; KHODOROV, L.R., inzhener, retsenzent; SHUPLOV, V.I., kandidat tekhnicheskikh nauk, retsenzent; KLYKOV, A.F., inzhener, retsenzent; YUDZON, D.M., tekhnicheskiy redaktor; VERINA, G.P., tekhnicheskiy redaktor.

[Technical handbook for railroad men] Tekhnicheskii spravochnik zheleznychodorozhnika. Vol. 8. [Signaling, central control, block system, and communication] Signalizatsiya, tsentralizatsiya, blokirovka, sviaz'. Red. kollegija A.F. Baranov [1 dr.] Glav.red. E.P. Endoi. Moskva, Gos. transp. zhel-dor. izd-vo, 1952. 975 p. (Card 2) (MLRA 8:2)  
(Railroads--Signalizing) (Railroads--Communication systems)

BARANOV, A.F., redaktor; BIZYUKIN, D.D., redaktor; VAKHIN, M.I., otvetstvennyy redaktor tomsa, professor, doktor tekhnicheskikh nauk; VEDEHISOV, B.N., redaktor; IVLIYEV, I.V., redaktor; MOSCHUK, I.D., redaktor; RUDOV, Ye.P., glavnyy redaktor; SOKOLINSKIY, Ya.I., redaktor; SOLOGUBOV, V.M., redaktor; SHILEVSKIY, V.A., redaktor; ALFEROV, A.A., inzhener; ANASHKIN, B.T., inzhener; AFANAS'YEV, Ye.V., laureat Stalinskoy premii, inzhener; BELENKO, K.M., dotsent; BORISOV, D.P., dotsent, kandidat tekhnicheskikh nauk; ZHIL'TSOV, P.N., inzhener; ZBAR, N.R., inzhener; IL'YENKOV, V.I., dotsent, kandidat tekhnicheskikh nauk; KAZAKOV, A.A., kandidat tekhnicheskikh nauk; KRAYZMER, L.P., kandidat tekhnicheskikh nauk; MAYSHEV, P.V., professor, kandidat tekhnicheskikh nauk; MARKOV, M.V., inzhener; NELEPETS, V.S., dotsent, kandidat tekhnicheskikh nauk; NOVIKOV, V.A., dotsent; ORLOV, N.A., inzhener; PETROV, I.I., kandidat tekhnicheskikh nauk; PIVKO, G.M., inzhener; GODIN, A.M., inzhener; RAMBAU, P.N., dotsent, kandidat tekhnicheskikh nauk; ROGINSKIY, V.N., kandidat tekhnicheskikh nauk; RYAZANTSEV, B.S., laureat Stalinskoy premii, dotsent, kandidat tekhnicheskikh nauk; SHARSKIY, A.A., inzhener; YEL'DIMAN, A.B., inzhener; SHASTIN, V.A., laureat Stalinskoy premii, inzhener; SHUR, B.I., inzhener; GONCHUKOV, V.I., inzhener, retsensent; NOVIKOV, V.A., dotsent, retsensent; AFANAS'YEV, Ye.V., laureat Stalinskoy premii, retsensent;

[Technical handbook for railroad men] Tekhnicheskii spravochnik zheleznodorozhnika. Vol. 8. [Signaling, central control, block system, and communication] Signalizatsiya, tsentralizatsiya, blokirovka, svias'. Red. kollegija A.F.Baranov [i dr.] Olav.red. E.P.Rudov. Moskva, Gos. transp. zhel-dor. izd-vo, 1952. 975 p.

(Continued on next card)

NELEPETS, V.S.; TSUKKERMAN, L.P.; METTAS, N.A., inzhener, redaktor; SADOV, I.Ya.,  
inzhener, redaktor; VERINA, G.P.; tekhnicheskiy redaktor.

[The servicing of railroad radio installations] Obsluzhivanie zhelezno-  
dorozhnykh radioustroistv. Pod red. N.A.Mettas. Moskva, Gos. transp. zhel-  
dor. izd-vo, 1953. 107 p.  
(Radio--Installation in trains)

METTAS, N., laureat Stalinskoy premii, nachal'nik.

Radio in railroad transportation. Radio no.11:21-23 N '53. (MLRA 6:11)

1. Otdel radiosvyazi Glavnogo upravleniya signalizatsii i svyazi Ministerstva  
putey soobshcheniya.  
(Railroads--Electronic equipment)

E-CERPTA MEDICA Sec 8 Vol 12/1 Neurology Jan 59

720. REMARKS ON FREUD'S CONCEPTION OF REGRESSION. Russ. of '68  
Mitte A - Z. NEUROPSYCHIAT. 1958, 53, 1, 67-71. 40 p.

It is contended that Freud's theory is a pseudoscientific theory, even Christian thinkers have recently built bridges to this theory. Psychiatry in capitalist countries has also borrowed from Freud's theories in recent years. The conception of regression has been among the material borrowed. An analysis is made of Freud's first notion of regression, as reversed memory-perception process, as well as of the ontogenetic ideas of regression such as the definition of regression given by H. Hoff (1956). All these hypotheses are stated to show a lack of knowledge of the discoveries of the Russian physiological school in the western countries. The paper concludes in a hypothesis in which the wish is regressively rather than thought, viz.: "The unscientific nature of Freud's theories can readily be demonstrated. They are unlikely to be maintained much longer". Caruso - Vienna

PA 11/49T103

METTER, I.

May 48

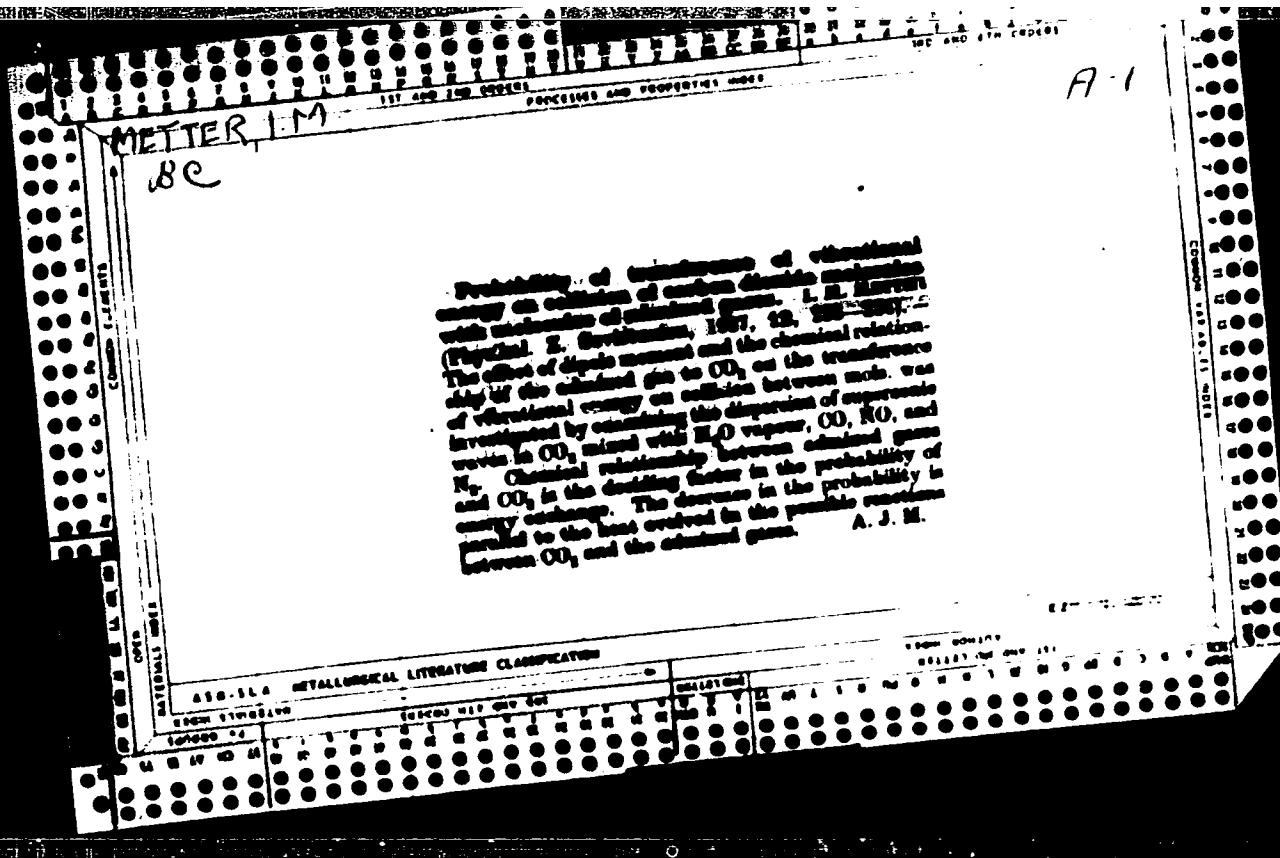
USRR/Physics  
Cavitation

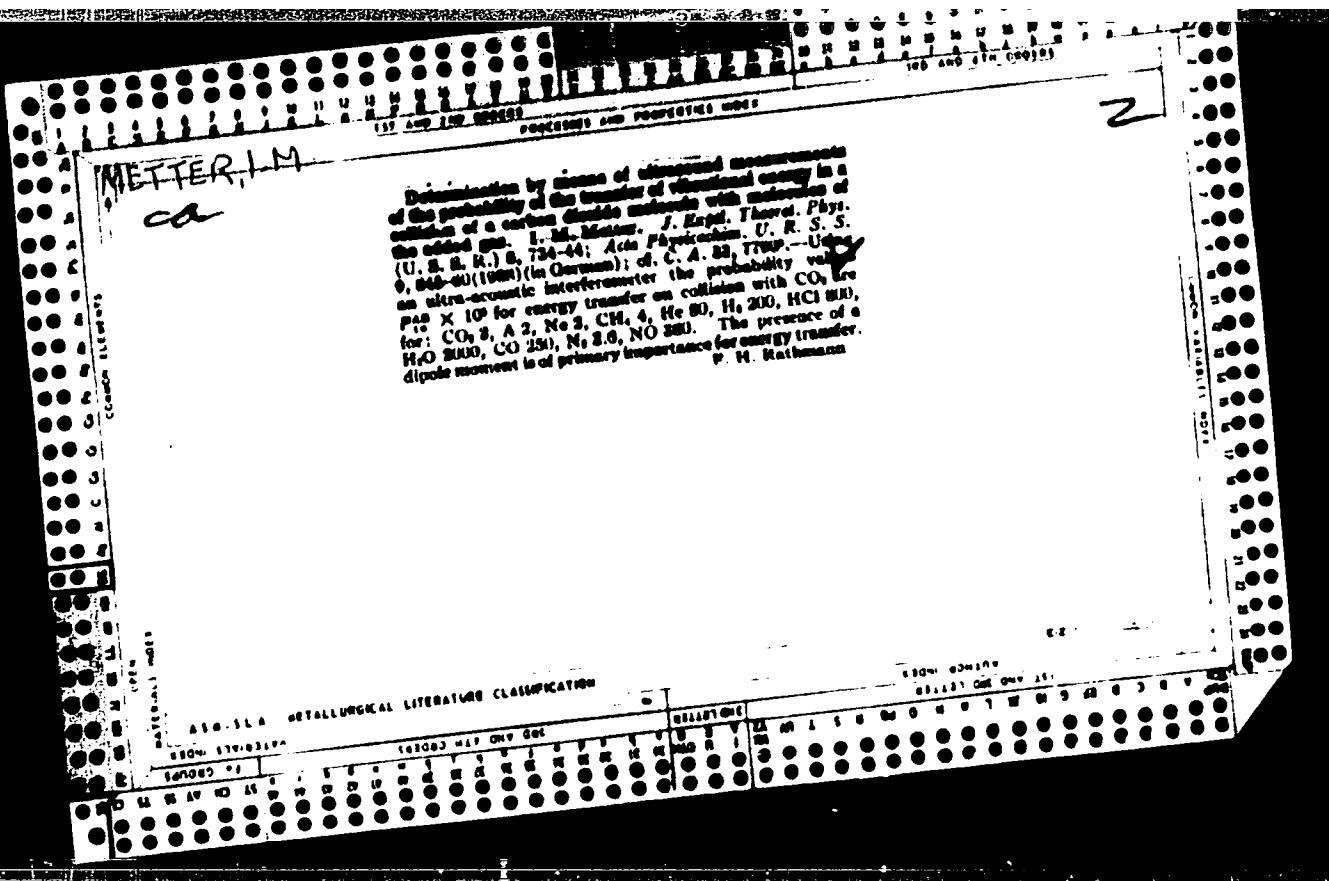
"Physical Nature of Cavitation and the Mechanism of  
Cavitation Damage," I. Metter, 28 pp

"Uspekhi Fiz Nauk" Vol XXXV, No 1

Discusses conditions under which cavitation occurs,  
methods of investigation, damage in water, aqueous  
solutions and organic liquids, relation between ex-  
ternal pressure and temperature, effect of viscosity  
and surface tension, chemical reaction during  
cavitation, cavitation resistance and mechanical  
properties of materials.

11/49T103





METTER, I.M.

Mechanism of losses in ice-covered high-frequency communication  
lines. Elektrosviaz' 10 no.11:76-77 N '56. (MLRA 9:12)

(Electric lines)

METTER, I.M.

[Introduction to quantum electronics] Vvedenie v kvant.-vuiu elektroniku; uchebnoe posobie. Leningrad, Leningr. elektrotekhn. in-t sviazi im. prof. M.A.Bonch-Bruevicha. Pt.2. 1964. 51 p. (I.IKA 17:6)

VALYASHKO, M.G.; POLIVANOVA, A.I.; ZHEREBTSOVA, I.K.; METTIKH, S.I.;  
VLASOVA, N.K.; NIKOLAYEV, A.V., ovt. red.; STREL'YAEV, A.S.,  
red.

[Geochemistry and genesis of brines of the Irkutsk amphitheater]  
Geokhimiiia i genezis rassolov Irkutskogo amfiteatra. Moskva, Nauka, 1965. 158 p. (MIRA 19:1)

METTIKH, L. I. and OVCHINNIKOV, L. N.

"Relationship Between Ore Formation and Assimilation, According to Experimental Data" p. 138

"Synthesis and Structure of Hydrosilicates containing Simple and Complex Heavy Metal Cations" p. 38

Transactions of the Fifth Conference on Experimental and Applied Mineralogy and Petrography, Trudy ... Moscow, Izd-vo AN SSSR, 1958. 516pp.

reprints of reports presented at conf. held in Leningrad, 26-31 Mar 1956. The purpose of the conf. was to exchange information and coordinate the activities in the fields of experimental and applied mineralogy and petrography, and to stress the increasing complexity of practical problems.

S/137/62/000/003/182/191  
A154/A1C1

AUTHORS: Yershov, V. M.; Mettikh, L. I.

TITLE: A rapid method of determining germanium in coal and ash.

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 4, abstract 3 K 15  
(Sb. "Khim., fiz.-khim. i spektr. metody issled. rud redk. i  
rasseyan. elementov". Moscow, Gosgeoltekhnizdat, 1961, 57 - 60)

TEXT: 5 - 10 g of coal (grain size 0 - 1.5 mm) or 1 g of ore is ashed in a porcelain cup in a muffle furnace without mixing at 550° for 1 h. The ash is transferred to a distiller, and 10 ml of HCl (1 : 1) + 8 drops of concentrated H<sub>3</sub>PO<sub>4</sub> are added. 5 ml of water is poured into the receiver, and GeCl<sub>4</sub> is distilled off, 8 - 9 ml of distillate being collected. After cooling, another 5 ml of HCl (1 : 1) is added and distillation carried out for a second time, 5 ml of distillate being collected. All the distillate is transferred to a 25-ml retort, which is filled up to the mark with water. 5 - 10 ml of the obtained solution is used to bring up 1 n. HCl to 10 ml, 1 ml of a 0.5% solution of gelatin and 1 ml of a 0.05% solution of phenyl fluoron are added, and the color compared with stand-

Card 1/2

A rapid method of determining germanium ....

S/137/62/000/003/182/181  
A154/A101

ards prepared at the same time as the sample after 50 - 60 mins. The series of standards are prepared by 0.05 - 0.45 ml of the solution of Ge (0.01 mg/ml), to which up to 10 ml of 1 n. HCl is added and which is dyed as described above. There are 18 references.

N. Gertseva

[Abstracter's note: Complete translation]

Card 2/2

OVCHINNIKOV, L.N.; YUNIKOV, B.A.; METTIKH, L.I.

Composition and structure of hydromica in the Buldym deposit.  
Trudy Gor.-geol.inst. UFAN SSSR no.56:3-18 '61. (MIRA 15:7)  
(Buldym Lake region--Hydromica)

YUNIKOV, B.A.; OVCHINNIKOV, L.N.; METTIKH, L.I.

Determination of the composition of garnet of the grossular-andradide series based on the parameter of ~~a unit cell~~. Trudy Gor.-geol.inst. UFAN SSSR no. 56:45-48 '61. (MIRA 15:7)  
(Garnet—Analysis)

*Mettikh, A.K.*

## FDAM 1 BOOK EXPLOITATION Sov/3727

Rezhireniye vozmozhnosti Plastmas v konstruktsiyakh  
mashin (widening the Possibilities of Plastic in  
Machinery Components) Moscow, 1959. 183 p. 8,000  
copies printed.

Authors: N.V. Popov, Engineer; and P.Z. Petukhov, Doctor of Technical Sciences; Ed.: M.I. Sustov, Engineer; Tech. Eds.: N.A. Durniuk and A.P. Ovraova; Exec. Ed.: I.M. Sosova, Engineer.

PURPOSE: The book is intended for engineers and scientists engaged in the study and manufacture of plastics and plastic machine parts.

CONTENTS: The chapters of this book were written by different authors indicated in parentheses after each chapter in the table of contents. The chapter on the use of plastics in non-Soviet countries includes data on the Skoda Works in Czechoslovakia. A number of Soviet manufacturing establishments are mentioned. Equipment using plastic parts is described and evaluated. Considerable attention is paid to nonferrous and chemical enterprises as well as to the problem of substituting plastic materials for critical materials in types of equipment subjected to wear or to corrosive, abrasive, and chemical influences. Brand designations, properties, and uses of a number of Soviet-made plastic materials are given. It is thus a survey of modern Soviet plastic materials. The book also gives a survey of modern Soviet plastic materials grouped according to their specific application in industry. The authors rely heavily upon the experience of Ural plants, especially those specializing in electrical apparatus, automotive equipment, and measuring instruments. No personalities are mentioned. There are 37 references:

|   |     |
|---|-----|
| Ch. IV. Plastic Articles for Corrosive Media (B.P. Matikov, A.I. Kasak, T.D. Krashin)   | 68  |
| 1. Centrifugal pump made of "voloknite" [a phenol-formaldehyde resin with cotton fiber] | 71  |
| 2. Pump parts and linings made from a abrasive materials                                | 71  |
| 3. Valve made of vinyl plastics   | 74  |
| Ch. V. Use of Plastics in Foreign Countries (A.A. Domashov and F.V. Kravzinger)         | 77  |
| 1. Use of plastics in machine and instrument elements [fabrics]                         | 77  |
| 2. Use of plastics in Czechoslovakian plants  | 109 |
| Appendices (I.K. Mettikh, I.B. Pleseky)   | 114 |
| I. General Characteristics and Fields of Application of Plastics                        | 114 |
| II. Mechanical Properties of Plastics   | 150 |

Card 5/6

(7)

CASANDROIU, T., elev (Ploiesti); DUMITRESCU, Florea I. (Craiova);  
MUNTEANU, I., prof. (Vaslui); METTLER, Martin, prof. (Viseul de  
sus); TOMOIOAGA, D.M.; IONESCU-TIU, C.; STANESCU, I., (Sibiu);  
SULA, Octavian (Valea Rea, Iasi); POPA, Eugen, elev (Iasi)

Problems and exercises proposed for grades 5-8. Gaz mat B 14:  
563-565 9 S '63.

MET'S, A. M., IL'INSKIY, S. A. (Mining Engineers)

Coal Mines and Mining

All-inclusive projecting is necessary. Ugol' no. 6(315) (1952)

Monthly List of Russian Accessions, Library of Congress, August, 1952. Unclassified.

METTS, A.M., gorny inzhener.

Standard plan for surface facilities for a coal mine of 300,000  
tons yearly capacity under conditions prevailing in the Moscow  
Basin. Ugol' 29 no.9: 15-20 S '54. (MLRA 7:11)

1. Lengiproshakht.  
(Moscow Basin-- Coal mines and mining)

METTS, A.M.

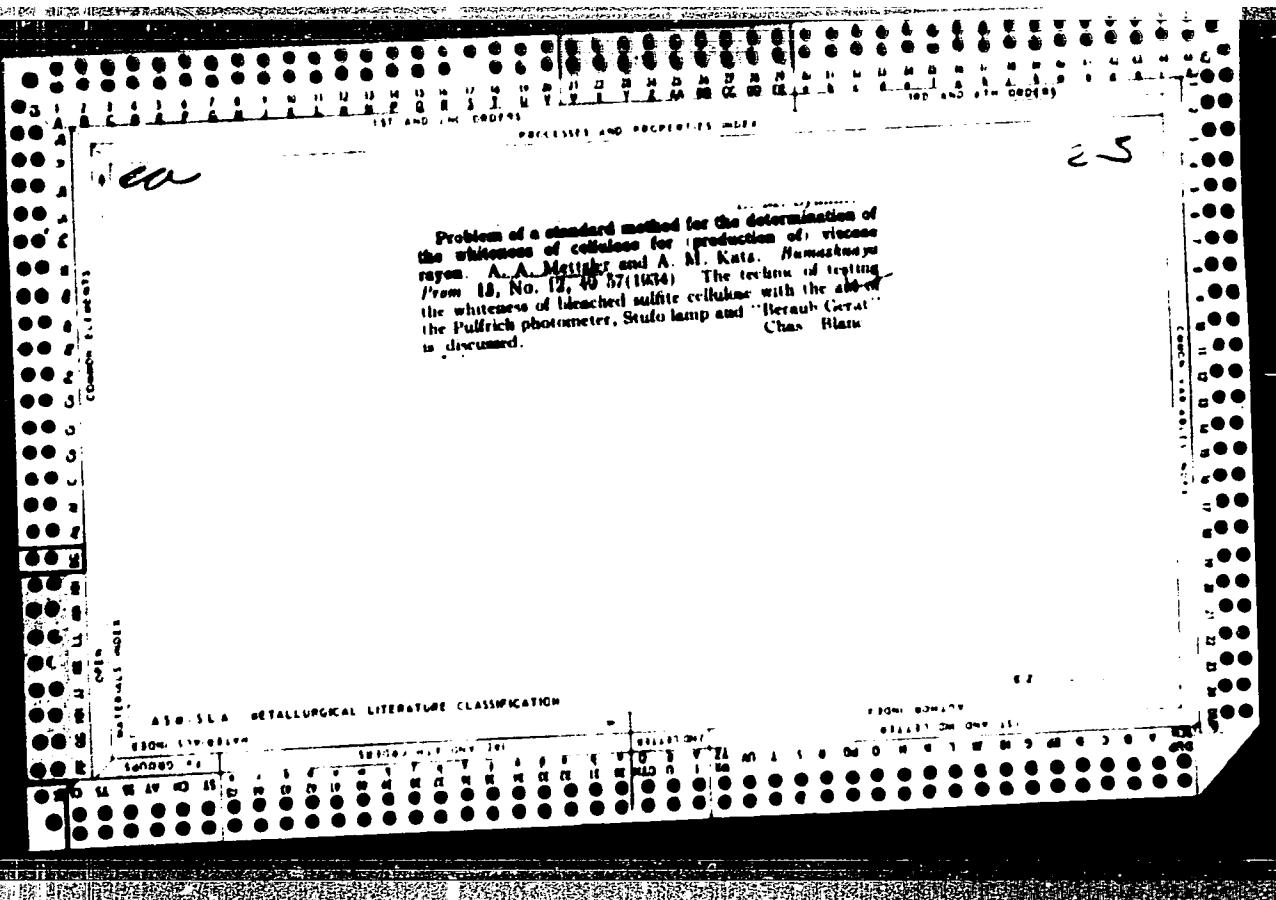
Leningrad State Institute for the Design and Planning of Coal  
Mine Building. Shakht.stroi. no.11:25-27 N '57. (MIRA 10:12)

1. Glavnnyy inzhener instituta Lengiproshakht.  
(Leningrad--Research, Industrial) (Coal mines and mining)

Mettsel, N.G.

7  
4E4X  
4E3d

Transformation of hydrocarbons in the presence of oxide catalyst. VII. Transformations of *n*-hexadecane over molybdenum catalyst. V Yu. N. Il'yaev and N. G. Mettsel (State Univ., Saratov). *Zhur. Obshchey Khim.* 27, 1780-92 (1957); cf. *C.A.* 42, 1570; 50, 10636u; Rozenberg, *C.A.* 45, 2885a).—Passage of  $C_{16}H_{34}$  over the commercial molybdenum catalyst contg. 8%  $Mo_3O_10$  at 530° gave a wide range of products contg.  $C_6H_6$ , MePh,  $\alpha$ -xylene, PrPh,  $\alpha$ -Et $C_6H_5$ Me, BuPh,  $\alpha$ -C $_6H_5$ Bt, and  $\alpha$ -PrC $_6H_5$ Me, which were positively identified. It is believed that the reaction involves coking and gas formation and cracking to  $C_6H_6 + C_6H_6$  and other fragments which then yield the cyclic products listed above.  
G. M. Kosolapoff



METSLER, A. B.

CA

Björkman numbers of bleached cellulose. (I. P. Golova and A. A. Mettsler. *Rumazhnaya Prom.* 17, 21 (1930).—The Björkman no. is practically not affected by the pitch content in the cellulose, but it does vary with the degree of delignification of ordinary tech. cellulose. The lignin content in standard viscose cellulose varies from 0.14 to 0.36% when detg. in previously extd. cellulose by the method of Golova and Katz (cf. C. A. 29, 6755). In the Schwalbe and Becker method it varies from 0.97 to 1.2% without previous extn. The Björkman no. for viscose cellulose varied from 5.8 to 9.8. No conversion factor was found to relate the Björkman no. to lignin content as detd. by  $H_2SO_4$ . An increase in Björkman no. above 10.12 produced difficulties in converting the cellulose to viscose. The method of detg. the Björkman no. is given. B. Z. Kamich

METTLER, A.R.

1. One

3

(2) 3263. Quantitative determination of benzil. A. K. Ruzhentseva and A. A. Mettler (J. Russ. Chem., USSR, 1950, 6, 160-162). Two methods of determining benzil are described. (1) Condensation with *o*-phenylenediamine to give a quant. yield of diphenylquinoxaline. A mixture of 0.12-0.15 g. of benzil, 0.1-0.11 g. of *o*-phenylenediamine, and 5 ml. of ethanol is boiled under reflux for 2 hr. and set aside for 12 hr. The excess of *o*-phenylenediamine is dissolved in 15 ml. of 5% HCl, and the solution filtered from the ppt. which is then washed with 5% HCl and dried to const. wt. at 80°. (2) Oxidation to benzoic acid by  $H_2O_2$  in NaOH solution. A solution of 0.2 g. of benzil in 2 ml. of pyridine is treated with 10 ml. of 20% NaOH and 10 ml. of 15%  $H_2O_2$  and boiled for 15 min. under reflux. The pyridine is distilled off with steam, and then 25 ml. of 20%  $H_2SO_4$  and 10 g. of  $Na_2SO_4$  are added and the benzoic acid is distilled into a receiver containing 50 ml. of water. After 200 ml. have been collected, the receiver is changed and further 150-ml. portions are collected until a titration of the last with 0.1N-NaOH requires >0.05 ml. The total titration corresponds to the benzoic acid content, if a blank is carried out and the result deducted.

G. S. SMITH

METTLER, A. A.

27  
Purification of soluble cadmium salts used in the preparation of luminescences from traces of other metals. T. B.  
Savchenko, A. M. Chivush, A. A. Mettler, M. S. Rabinovich,  
V. V. Sinyavskiy, and L. A. Gerasimov. U.S.S.R. 101,671.  
Dec. 19, 1965. The solution of Cd salts is passed consecutively through 3 chromatographic columns, the 1st of which is charged with  $\text{Al}_2\text{O}_3$ , the 2nd with a mixt. of activated C or  $\text{Al}_2\text{O}_3$  and dimethylglyoxime, and the 3rd with activated C. M. Horesh

8  
4E4j

for ref